We claim:

## 1. A compound of the formula

or a pharmaceutically acceptable salt thereof wherein:

R<sub>1</sub> is H; C<sub>1-2</sub>

H;  $C_{1-4}$  alkyl;  $C_{2-4}$  alkyl substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;

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H;  $C_{1-8}$  alkyl;  $C_{2-8}$  alkyl substituted with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$ alkoxy,  $C_{2-4}$ alkoxy $C_{1-4}$ alkoxy,  $OC(=0)R_7$ , or  $C(=0)R_7$ ;  $C_{3-7}$  alkenyl unsubstituted or substituted optionally with OH,  $NR_5R_6$ , or  $C_{1-4}$ alkoxy;  $C_{3-7}$  alkynyl unsubstituted or substituted optionally with  $C_1$ - $C_3$ alkyl,  $C_1$ - $C_3$ halo alkyl, OH,  $NR_5R_6$ , or  $C_{1-4}$  alkoxy;  $C_{1-3}$  alkyl substituted with phenyl or  $R_{10}$  either of which can be unsubstituted or substituted opt/onally with  $C_1-C_3$  alkyl,  $C_1-C_3$  halo alkyl, OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is 0 - 2 and n is 0 - 2;  $C_{2-4}$  alkoxy substituted optionally with  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy, or  $C(=0)R_7$ ; phenyl or  $R_{10}$ either of which/can be unsubstituted or substituted optionally with OH,  $(CH_2)_n NR_5 R_6 / halogen$ ,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_m R_8$ or  $SO_2NR_5R_6$ , wherein m is 0 - 2 and n is 0 - 2; provided that  $R_1$  and R, cannot both be H; or R, and R, can be joined to form a saturated ring of 5/or 6 atoms selected from 0, S, C or N, such as, pyrrolidiné, oxazolidine, thiomorpholine, thiomorpholine 1,1 dioxide, dioxide, thiazolidine 1,1 piperazine, morpholiné,

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tetrahydrooxazine, which can be unsubstituted or substituted optionally on carbon with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C(=0)R_7$ ,  $C_{1-6}$  alkyl,  $C_{1-6}$  alkyl substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C(=0)R_7$  or on nitrogen with  $NR_5R_6$ ,  $C_{1-4}$  alkoxy,  $C(=0)R_7$ ,  $C_{1-6}$  alkyl or  $C_{2-6}$  alkyl substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;

 $R_3$  is H; halogen;  $C_{1-4}$  alkyl;  $C_{1-8}$  alkoxy;  $C_{1-8}$  alkylthiol;  $C_{2-8}$  alkoxy substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;  $C_{1-4}$  alkyl substituted optionally with  $R_4$ ; or  $R_1$  and  $R_3$  can be joined together with carbon atoms to form a ring of from 5 to 7 members in which said carbon atoms can be unsubstituted or substituted optionally with  $R_4$ ;

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 $R_4$  is OH;  $C_{1-4}$  alkyl unsubstituted or substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;  $C_{1-4}$  alkoxy;  $C_{2-4}$  alkoxy substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;  $NR_5R_6$ ; phenyl or  $R_{10}$  either of which can be unsubstituted or substituted optionally with OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m/is O - 2 and n is O - 2;

Provided that when G is  $SO_2$  and  $R_3$ /is in the 4 position and is H or halogen then  $R_1$  and  $R_2$  are not H,  $C_{1-6}$  alkyl substituted optionally with OH,  $C_{1-6}$  alkoxy,  $C_{2-6}$  alkoxycarbonyl,  $C_{2-6}$  alkenyl, phenyl, phenoxy, pyridyl, tetrahydrofuryl,  $C_{2-6}$  alkanoyl,  $C_{2-6}$  alkenyl, nor are they joined to form a 5, 6 or 7 member ring, saturated or unsaturated, comprised of atoms selected optionally from C, O, S, N in which said nitrogen, when saturated, is substituted optionally with H or  $C_{1-6}$  alkyl or in which said carbon is substituted optionally with  $C_{1-6}$  alkyl,  $C_{1-6}$  alkoxy or OH; and when  $R_3$  is in the 5 position and is H,  $C_{1}$ , Br, or  $C_{1-3}$  alkyl then neither  $R_1$  nor  $R_2$  can be H or  $C_{1-4}$  alkyl; and when G is C(-1)0 and in the 5- position and  $R_3$ 1 is H, then  $R_1$ 1 and  $R_2$ 2 cannot both be  $CH_3$ 3;

 $R_5$  &  $R_6$  are the same of different and are H;  $C_{1-4}$  alkyl;  $C_{2-4}$  alkyl substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;  $C_{1-4}$  alkoxy;  $C_{2-4}$  alkoxy substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy

or  $C(=0)R_7$ ;  $C_{3-7}$  alkenyl unsubstituted or substituted optionally with OH,  $NR_5R_6$ , or  $C_{1-4}$  alkoxy;  $C_{3-7}$  alkynyl unsubstituted or substituted optionally with OH,  $NR_5R_6$ , or  $C_{1-4}$  alkoxy;  $C_{1-2}$  alkyl $C_{3-1}$ <sub>5</sub>cycloalkyl;  $C(=0)R_7$  or  $R_5$  and  $R_6$  can be joined to form a ring of 5 or 6 atoms selected from O, S, C or N, such as, pyrrolidine, thiomorpholine, thiomorpholine 1,1 morpholine, piperazine, or thiazolidine 1,1-dioxide, which can be unsubstituted or substituted optionally on carbon with OH, (=0), halogen,  $C_{1-4}$  alkoxy,  $C(=0)R_{7}$ ,  $C_{1-6}$  alkyl,  $C_{1-6}$  alkyl substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy,  $C(=0)R_7$  or on nitrogen with  $C_{1-4}$  alkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$ ,  $C_{1-6}$  alkyl or  $C_{2-6}$  alkyl substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy,  $C(=0)R_7$  or on sulfur by  $(=0)_m$ , wherein m is 0 - 2;

 $C_{1-8}$  alkyl;  $C_{1-8}$  alkyl substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_9$ ;  $C_{1-4}$  alkoxy;  $C_{2-4}$  alkoxy substituted optionally with OH,  $NR_5R_6$ , halogen of  $C_{1-4}$  alkoxy;  $NR_5R_6$ ; or phenyl or  $R_{10}$  either of which can be unsubstituted or substituted optionally with OH, halogen,  $C_{1-3}$ alkyl,  $C_{1-3}$  halogikoxy,  $(CH_2)_nNR_5R_6$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein n is 0 or 1 and m is  $\emptyset$ -2;

 $R_8$  is  $C_{1-4}$  alkyl;  $Q_{2-4}$  alkyl substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$ alkoxy or  $\mathcal{L}(=0)R_7$ ;

 $R_9$  is  $C_{1-4}$  alkyl;  $C_{1-4}$  alkoxy; amino,  $C_{1-3}$  alkylamino, or di- $C_{1-3}$  alkylamino;

a/monocyclic ring system of 5 or 6 atoms composed of C, N, O, and/or  $\pm$ , such as furan, thiophene, pyrrole, pyrazole, imidazole, triazole, tetrazole, oxazole, isoxazole, isothiazole, thiazole, thiadiazole, pyridine, pyrimidine, pyridazine, and pyrazine; and

C(=0) or  $SO_2$ .

- The compound of Claim 1 wherein:  $R_3$  is in the 4-position and  $GNR_1R_2$  is 2. in the 5-position.
- The compound of Claim 2 wherein: 3.

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- $R_1$  is H;  $C_{1-4}$  alkyl;  $C_{2-4}$  alkyl substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;
  - H;  $C_{1-8}$  alkyl;  $C_{2-8}$  alkyl substituted with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$ alkoxy,  $C_{2-4}$ alkoxy $C_{1-4}$ alkoxy,  $OC(=0)R_7$ , or  $C(=0)R_7$ ;  $C_{3-7}$  alkenyl unsubstituted or substituted optionally with OH,  $NR_5R_6$ , or  $C_{1-4}$ alkoxy;  $C_{3-7}$  alkynyl unsubstituted or substituted optionally with  $C_1$ - $C_3$ alkyl,  $C_1$ - $C_3$ halo alkyl, OH,  $NR_5R_6$  or  $C_{1-4}$  alkoxy;  $C_{1-3}$  alkyl substituted with phenyl or  $R_{10}$  either of which can be unsubstituted or substituted optionally with  $C_1$ - $C_3$ alkyl,  $C_1$ - $C_3$ halo alkyl, OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is 0 - 2 and n is 0 - 2;  $C_{2-4}$  alkoxy substituted optionally with  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy, or  $C(=0)R_7$ ; phenyl or  $R_{10}$ either of which can be unsubstituted or substituted optionally with OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$ or  $SO_2NR_5R_6$ , wherein m/is 0 - 2 and n is 0 - 2; provided that  $R_1$  and  $R_2$  cannot both be  $H_2$  or  $R_1$  and  $R_2$  can be joined to form a saturated ring of 5 or 6 /atoms selected from 0, S, C or N, such as, pyrrolidine, oxazólidine, thiomorpholine, thiomorpholine 1,1 dioxide, piperazine, thiazolidine 1,1 dioxide, morpholine, tetrahydrooxazine, which can be unsubstituted or optionally on carbon with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C(=0)R_7$ ,  $C_{1-6}$ alkyl,  $C_{1-6}$ /alkyl substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$ alkoxy,  $C(=0)R_7$  or on nitrogen with  $NR_5R_6$ ,  $C_{1-4}$  alkoxy,  $C(=0)R_7$ ,  $C_{1-6}$ alkyl oy  $C_{2-6}$  alkyl substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-6}$ <sub>4</sub> alkoxy or  $C(=0)R_7$ ;
- $R_3$  is H; halogen;  $C_{1-4}$  alkyl;  $C_{1-8}$  alkoxy;  $C_{1-8}$  alkylthiol;  $C_{2-8}$  alkoxy substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkyl substituted optionally with  $R_4$ .
- 4. The compound of Claim 2 wherein:

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 $\rm R_1$  and  $\rm R_3$  are joined together with carbon atoms to form a ring of from 5 to 7 members in which said carbon atoms are unsubstituted or substituted with  $\rm R_4$  .

5. The compound of Claim 4 wherein:

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 $R_2$  is H;  $C_{1-4}$  alkyl;  $C_{2-4}$  alkyl substituted with OH,  $NR_5R_6$ , halogen,  $C_{1-2}$  alkoxy,  $C_{2-4}$  alkoxy $C_{1-4}$  alkoxy,  $OC(=0)R_7$ , or  $C(=0)R_7$ ; phenyl, or  $R_{10}$ , unsubstituted or substituted optionally with  $C_1$ - $C_3$  alkyl,  $C_1$ - $C_3$  halo alkyl, OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is O-2 and n is O-2;  $C_{1-3}$  alkyl substituted with phenyl or  $R_{10}$  either of which can be unsubstituted or substituted optionally with  $C_1$ - $C_3$  alkyl,  $C_1$ ,  $C_3$  halo alkyl OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is O-2 and n is O-2.

6. The compound of Claim 5 wherein:  $G = SO_2$  and

 $R_4$  is OH;  $C_{1-4}$  alkoxy;  $C_{2-4}$  alkoxy substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ; or  $NR_5R_6$ ; phenyl, or  $R_{10}$  unsubstituted or substituted optionally with OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is O-2 and n is O-2

## 7. A compound of the formula

 $R_1$  is

H;  $C_{1-4}$  alkyl;  $C_{2-4}$  alkyl substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;

R<sub>2</sub> is

H;  $C_{1-8}$  alkyl;  $C_{2-8}$  alkyl substituted with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$ alkoxy,  $C_{2-4}$ alkoxy $C_{1-4}$ alkoxy/  $OC(=0)R_7$ , or  $C(=0)R_7$ ;  $C_{3-7}$  alkenyl unsubstituted or substituted optionally with OH,  $NR_5R_6$ , or  $C_{1-4}$ alkoxy;  $C_{3-7}$  alkynyl unsubstituted or substituted optionally with OH,  $NR_5R_6$ , or  $C_{1-4}$  alkoxy;  $C_{1-3}/a!kyl$  substituted with phenyl or  $R_{10}$  either of which can be unsubstituted or substituted optionally with  $C_1$ - $C_3$ alkyl,  $C_1$ - $C_3$ halo alkyl, OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$ haloalkoxy,  $C(=0)R_7$ ,  $S(\not=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is 0 - 2 and n is 0 - 2;  $C_{2-4}$  alkoxy substituted optionally with  $NR_5R_6$ , halogen,  $C_{1-4}$ alkoxy, or  $C(=0)R_7$ ; phenyl or  $R_{10}$  either of which can be unsubstituted or substituted opt/onally with  $C_1-C_3$  alkyl,  $C_1-C_3$  halo alkyl, OH,  $(CH_2)_nNR_5R_6$ , halogen/ $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m/is 0 - 2 and n is 0 - 2; provided that  $R_1$  and  $R_2$ cannot both be H; pr R<sub>1</sub> and R<sub>2</sub> can be joined to form a saturated ring of 5 or 6 atoms \$elected from 0, S, C or N, such as, pyrrolidine, oxazolidine, thiqmorpholine, thiomorpholine 1,1 dioxide, morpholine,

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piperazine, thiazolidine 1,1 dioxide, or tetrahydrooxazine, which can be unsubstituted or substituted optionally on carbon with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C(=0)R_7$ ,  $C_{1-6}$  alkyl,  $C_{1-6}$  alkyl substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C(=0)R_7$  or on nitrogen with  $NR_5R_6$ ,  $C_{1-4}$  alkoxy,  $C(=0)R_7$ ,  $C_{1-6}$  alkyl or  $C_{2-6}$  alkyl substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy of  $C(=0)R_7$ ;

 $R_3$  is H; halogen;  $C_{1-4}$  alkyl;  $C_{1-8}$  alkoxy;  $C_{1-8}$  alkylthiol;  $C_{2-8}$  alkoxy substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;  $C_{1-4}$  alkyl substituted optionally with  $R_4$ ; or  $R_1$  and  $R_3$  can be joined together with carbon atoms to form a ring of from 5 to 7 members in which said carbon atoms can be unsubstituted or substituted optionally with  $R_4$ ;

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 $R_4$  is OH;  $C_{1-4}$  alkyl unsubstituted or substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;  $C_{1-4}$  alkoxy;  $C_{2-4}$  alkoxy substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1/4}$  alkoxy or  $C(=0)R_7$ ;  $NR_5R_6$ ; phenyl or  $R_{10}$  either of which can be unsubstituted or substituted optionally with OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is O-2 and n is O-2;

Provided that when G is  $SO_2$  and  $R_3$  is in the 4 position and is H or halogen then  $R_1$  and  $R_2$  are not H,  $C_{1-6}$  alkyl substituted optionally with OH,  $C_{1-6}$  alkoxy,  $C_{2-6}$  alkoxycarbonyl,  $C_{2-6}$  alkenyl, phenyl, phenoxy, pyridyl, tetrahydrofuryl,  $C_{2-6}$  alkanoyl,  $C_{2-6}$  alkenyl, nor are they joined to form a 5, 6 or 7 member ring, saturated or unsaturated, comprised of atoms selected optionally from C, O, S, N in which said nitrogen, when saturated, is substituted optionally with H or  $C_{1-6}$  alkyl or in which said carbon is substituted optionally with  $C_{1-6}$  alkyl,  $C_{1-6}$  alkoxy or OH; and when  $R_3$  is in the 5 position and is H, Cl, Br, or  $C_{1-3}$  alkyl then neither  $R_1$  nor  $R_2$  can be H or  $C_{1-4}$  alkyl; and when G is C(=0) and in the 5 position and  $R_3$  is is H then  $R_1$  and  $R_2$  cannot both be  $CH_3$ ;

 $R_5$  &  $R_6$  are the same or different and are H;  $C_{1-4}$  alkyl;  $C_{2-4}$  alkyl substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;  $C_{1-4}$  alkoxy;  $C_{2-4}$  alkoxy substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;  $C_{3-7}$  alkenyl unsubstituted or substituted optionally

with OH,  $NR_5R_6$ , or  $C_{1-4}$  alkoxy;  $C_{3-7}$  alkynyl unsubstituted or substituted optionally with OH,  $NR_5R_6$ , or  $C_{1-4}$  alkoxy;  $C_{1-2}$ alkyl $C_{3-1}$  $_{5}$ cycloalkyl; C(=0)R $_{7}$  or R $_{5}$  and R $_{6}$  can be joined to form a ring of 5 or 6 atoms selected from O, S, C or N, sych as, pyrrolidine, thiomorphøline 1,1 thiomorpholine, oxazolidine, thiazolidine 1,1-dioxide, piperazine, morpholine, tetrahydrooxazine, which can be unsubstituted or substituted optionally on carbon with OH, (=0), halogen,  $C_{1-4}$  alkoxy,  $C(=0)R_7$ ,  $C_{1-6}$  alkyl,  $C_{1-6}$  alkyl substituted optionally with OH, halogen,  $C_{1-4}$ alkoxy,  $C(=0)R_7$  or on nitrogen with  $C_{1-4}$  alkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$ ,  $C_{1-6}$  alkyl or  $C_{2-6}$  alkyl substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy,  $C(=0)R_7$  or on sulfur by  $(=0)_m$ , wherein m is 0 - 2;

is  $C_{1-8}$  alkyl;  $C_{1-8}$  alkyl substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_9$ ;  $C_{1-4}$  alkoxy;  $C_{2-4}$  alkoxy substituted optionally with OH,  $NR_5R_6$ , halogen or  $C_{1-4}$  alkoxy;  $NR_5R_6$ ; or phenyl or  $R_{10}$  either of which can be unsubstituted or substituted optionally with OH, halogen,  $C_{1-3}$  alkyl,  $C_{1-3}$  haloalkoxy,  $(CH_2)_nNR_5R_6$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein n is 0 or 1 and m is 0-2;

 $R_8$  is  $C_{1-4}$  alkyl;  $C_{2-4}$  alkyl substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;

 $R_9$  is  $C_{1-4}$  alkyl;  $C_{1-4}$  alkoxy; amino,  $C_{1-3}$  alkylamino, or di- $C_{1-3}$  alkylamino;

R<sub>10</sub> is a monocyclic/ring system of 5 or 6 atoms composed of C, N, O, and/or S, such as furan, thiophene, pyrrole, pyrazole, imidazole, triazole, tetrazole, oxazole, isoxazole, isothiazole, thiazole, thiadiazole, pyridine, pyrimidine, pyridazine, and pyrazine; and

G is  $SO_2$  and c=0 provided that when G is C=0 then  $R_1$  and  $R_3$  are not joined together in a six member ring.

8. The compound of Claim 7 wherein  $R_3$  is in the 4-position and  ${\rm GNR_1R_2}$  is in the 5-position.

9. The compound of Claim 8 wherein:

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 $R_1$  is H; C1-4 alkyl; or  $C_{2-4}$  alkyl substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;

 $R_2$  is H;  $C_{1-8}$  alkyl;  $C_{2-8}$  alkyl substituted with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{2-4}$ alkoxy $C_{1-4}$ alkoxy,  $OC(=0)R_7$ , or  $C(=0)R_7$ ;  $C_{3-7}$  alkenyl unsubstituted or substituted optionally with OH,  $NR_5R_6$ , or  $C_{1-4}$  alkoxy;  $C_{3-7}$  alkynyl unsubstituted or substituted optionally with OH,  $NR_5R_6$ , or  $C_{1-4}$  alkoxy;  $C_{1-3}$  alkyl substituted with phenyl or  $R_{10}$  which can be unsubstituted or substituted optionally with  $C_1-C_3$ alkyl,  $\mathcal{L}_1-C_3$ halo alkyl, OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is 0 - 2 and n is 0 -  $\frac{2}{3}$   $C_{2-4}$  alkoxy substituted optionally with  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy, or  $C(=0)R_7$ ; phenyl, or  $R_{10}$  unsubstituted or substituted optionally with  $C_1-C_3$ alkyl,  $C_1-C_3$ halo alkyl, OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is 0-2 and n is 0 - 2; provided that  $R_1$  and  $R_2$  cannot both be H; or  $R_1$  and  $R_2$  can be joined to form a saturated ring of 5 or 6 atoms selected from 0, S, C or N which can be unsubstituted or substituted optionally on carbon with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C(=0)R_7$ ,  $C_{1-6}$  alkyl,  $C_{1-6}$  alkyl substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  koxy,  $C(=0)R_7$  or on nitrogen with  $NR_5R_6$ ,  $C_{1-4}$  alkoxy,  $C(=0)R_7$ ,  $C_{1-6}$ /alkyl or  $C_{2-6}$  alkyl substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{4-4}$  alkoxy or  $C(=0)R_{7}$ ;

 $R_3$  is H; halogen;  $C_{1-4}$  alkyl;  $C_{1-8}$  alkoxy,  $C_{1-8}$  alkylthiol,  $C_{2-8}$  alkoxy substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ; or  $C_{1-4}$  alkyl substituted optionally with  $R_4$ .

10. The compound of Claim 8 wherein:

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 $R_1$  and  $R_3$  are joined together with cambon atoms to form a ring of from 5 to 7 members in which said carbon atoms are unsubstituted or substituted with  $R_4$ .

11. The compound of Claim 10 wherein:

 $R_2$  is H;  $C_{1-4}$  alkyl;  $C_{2-4}$  alkyl substituted with OH,  $NR_5R_6$ , halogen,  $C_{1-2}$  alkoxy,  $C_{2-4}$  alkoxy $C_{1-4}$  alkoxy,  $OC(=0)R_7$ , or  $C(=0)R_7$ ;  $C_{1-3}$  alkyl substituted with

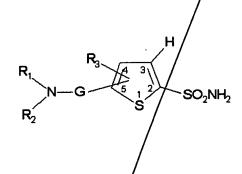
phenyl or  $R_{10}$  group either of which can be unsubstituted or substituted optionally with  $C_1$ - $C_3$ alkyl,  $C_1$ - $C_3$ halo alkyl, OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is O-2 and n is O-2; phenyl or a  $R_{10}$  either of which can be unsubstituted or substituted optionally with  $C_1$ - $C_3$ alkyl,  $C_1$ - $C_3$ halo alkyl, OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is O-2 and n is O-2.

- 12. The compound of Claim 11 wherein:  $G/Jis/SO_2$  and
- $R_4$  is OH;  $C_{1-4}$  alkoxy;  $C_{2-4}$  alkoxy substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ; or  $NR_5R_6$ ; phenyl, or  $R_{10}$ , unsubstituted or substituted optionally with OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is 0-2 and n is 0
- 13. A compound of the formula

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R<sub>2</sub> is



or a pharmaceutically acceptable salf thereof wherein:

R<sub>1</sub> is H;  $C_{1-4}$  alkyl;  $C_{2-4}$  alkyl substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;

H;  $C_{1-8}$  alkyl;  $C_{2-8}$  alkyl substituted with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{2-4}$  alkoxy $C_{1-4}$  alkoxy,  $OC(=0)R_7$ , or  $C(=0)R_7$ ;  $C_{3-7}$  alkenyl unsubstituted or substituted optionally with OH,  $NR_5R_6$ , or  $C_{1-4}$  alkoxy;  $C_{3-7}$  alkynyl unsubstituted or substituted optionally with OH,  $NR_5R_6$ , or  $C_{1-4}$  alkoxy;  $C_{1-3}$  alkyl substituted with phenyl or  $R_{10}$  either

of which can be unsubstituted or substituted optionally with  $C_1$ - $C_3$ alkyl,  $C_1$ - $C_3$ halo alkyl, OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is O-2 and n is O-2;  $C_{2-4}$  alkoxy substituted optionally with  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy, or  $C(=0)R_7$ ; phenyl or  $R_{10}$  either of which can be unsubstituted or substituted optionally with  $C_1$ - $C_3$ alkyl,  $C_1$ - $C_3$ halo alkyl, OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C_1$ - $C_3$  haloalkoxy,  $C_1$ -

 $R_3$  is H; halogen;  $C_{1-4}$  alkyl;  $C_{1-8}$  alkoxy;  $C_{1-8}$  alkylthiol;  $C_{2-8}$  alkoxy substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;  $C_{1-4}$  alkyl substituted optionally with  $R_4$ ; or  $R_1$  and  $R_3$  can be joined together with carbon atoms to form a ring of from 5 to 7 members in which said carbon atoms can be unsubstituted or substituted optionally with  $R_4$ ;

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 $R_4$  is OH;  $C_{1-4}$  alkyl unsubstituted or substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;  $C_{1-4}$  alkoxy;  $C_{2-4}$  alkoxy substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;  $NR_5R_6$ ; phenyl or  $R_{10}$  either of which can be unsubstituted or substituted optionally with OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is O(-2) and n is O(-2); provided that when O(-2) where O(-2) is in the O(-2) position and is O(-2) alkyl then neither O(-2) and O(-2) alkyl;

 $R_5$  &  $R_6$  are the same or different and are H;  $C_{1-4}$  alkyl;  $C_{2-4}$  alkyl substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;  $C_{1-4}$  alkoxy;  $C_{2-4}$  alkoxy substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;  $C_{3-7}$  alkenyl unsubstituted or substituted optionally with OH,  $NR_5R_6$ , or  $C_{1-4}$  alkoxy;  $C_{3-7}$  alkynyl unsubstituted or substituted or substituted or substituted or substituted optionally with OH,  $NR_5R_6$ , or  $C_{1-4}$  alkoxy;  $C_{1-2}$  alkyl $C_{3-5}$  cycloalkyl;  $C(=0)R_7$  or  $R_5$  and  $R_6$  can be joined to form a ring of 5 or 6 atoms selected from O, S, C or N, such as, pyrrolidine, oxazolidine, thiomorpholine, thiomorpholine 1,1 dioxide, morpholine, piperazine, or thiazolidine 1,1-dioxide which can be

unsubstituted or substituted optionally on carbon with OH, (=0), halogen,  $C_{1-4}$  alkoxy,  $C(=0)R_7$ ,  $C_{1-6}$  alkyl,  $C_{1-6}$  alkyl substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy,  $C(=0)R_7$  or on nitrogen with  $C_{1-4}$  alkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$ ,  $C_{1-6}$  alkyl or  $C_{2-6}$  alkyl substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy,  $C(=0)R_7$  or on sulfur by  $(=0)_m$ , wherein m is  $(9-2)_m$ 

 $R_7$  is  $C_{1-8}$  alkyl;  $C_{1-8}$  alkyl substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_9$ ;  $C_{1-4}$  alkoxy;  $C_{2-4}$  alkoxy substituted optionally with OH,  $NR_5R_6$ , halogen or  $C_{1-4}$  alkoxy;  $NR_5R_6$ ; or phenyl or  $R_{10}$  either of which can be unsubstituted or substituted optionally with OH, halogen,  $C_{1-3}$  alkyl,  $C_{1-3}$  haloalkoxy,  $(CH_2)_nNR_5R_6$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein n is 0 or 1 and m is 0-2;

 $R_8$  is  $C_{1-4}$  alkyl;  $C_{2-4}$  alkyl substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;

 $R_{q}$  is  $C_{1-4}$  alkyl;  $C_{1-4}$  alkoxy; amino,  $C_{1-3}$  alkylamino, or di- $C_{1-3}$  alkylamino;

R<sub>10</sub> is a monocyclic ring system of 5 or 6 atoms composed of C, N, O, and/or S, such as furan, thiophene, pyrrole, pyrazole, imidazole, triazole, tetrazole, oxazole, isoxazole, isothiazole, thiazole, thiadiazole, pyridine, pyrimidine, pyridazine, and pyrazine; and

20 G is SO.

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14. The compound of Claim 13 wherein:  $R_3$  is in the 4-position and  $GNR_1R_2$  is in the 5-position.

- 15. The compound of Claim 14 wherein:
- $R_1$  is H;  $C_{1-4}$  alkyl; or  $C_{2-4}$  alkyl substituted optionally with OH, halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;
- $R_2$  is H;  $C_{1-4}$  alkyl;  $C_{2-4}$  alkyl substituted with OH,  $NR_5R_6$ , halogen,  $C_{1-2}$  alkoxy,  $C_{2-4}$  alkoxyC $_{1-4}$  alkoxy,  $OC(=0)R_7$ , or  $C(=0)R_7$ ; phenyl, or  $R_{10}$ , unsubstituted or substituted optionally with  $C_1$ - $C_3$  alkyl,  $C_1$ - $C_3$  halo alkyl, OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is 0 2 and n is 0 2;  $C_{1-3}$  alkyl substituted with phenyl or  $R_{10}$  either of which can be unsubstituted or substituted optionally with  $C_1$ - $C_3$  alkyl,  $C_1$ - $C_3$  halo alkyl, OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is 0 2 and n is 0 2.
- $R_3$  is H; halogen;  $C_{1-4}$  alkyl;  $C_{1-8}$  alkoxy;  $C_{1-8}$  alkylthiol;  $C_{2-8}$  alkoxy substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ;  $C_{1-4}$  alkyl substituted optionally with  $R_4$ .
- 16. The compound of Claim 14 wherein:

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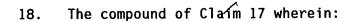
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 $R_1$  and  $R_3$  are joined together with carbon atoms to form a ring of from 5 to 7 members in which said carbon atoms are unsubstituted or substituted with  $R_4$ .

- 17. The compound of Claim 16 wherein:
- $R_2$  is H;  $C_{1-4}$  alkyl;  $C_{2-4}$  alkyl substituted with OH,  $NR_5R_6$ , halogen,  $C_{1-2}$  alkoxy,  $C_{2-4}$  alkoxy $C_{1-4}$  alkoxy,  $OC(=0)R_7$ , or  $C(=0)R_7$ ; phenyl, or  $R_{10}$ , unsubstituted or substituted optionally with  $C_1-C_3$  alkyl,  $C_1-C_3$  halogen,  $C_1$  alkoxy,  $C_1-C_3$  alkyl,  $C_1-C_3$  alkyl,  $C_1-C_3$  alkyl substituted with phenyl or  $R_{10}$  either of which can be unsubstituted or substituted optionally with  $C_1-C_3$  alkyl,  $C_1-C_3$  halo alkyl,  $C_1$  or  $C_1$  alkoxy,  $C_1$  halogen,  $C_1$  alkoxy,  $C_1$  haloalkoxy,  $C_1$  haloalkoxy,  $C_1$  alkoxy,  $C_1$  haloalkoxy,  $C_1$  haloalkoxy,  $C_1$  and  $C_1$  alkoxy,  $C_1$  haloalkoxy,  $C_1$  haloalkoxy, C



- $R_4$  is OH;  $C_{1-4}$  alkoxy;  $C_{2-4}$  alkoxy substituted optionally with OH,  $NR_5R_6$ , halogen,  $C_{1-4}$  alkoxy or  $C(=0)R_7$ ; or  $NR_5R_6$ ; phenyl, or  $R_{10}$ , unsubstituted or substituted optionally with OH,  $(CH_2)_nNR_5R_6$ , halogen,  $C_{1-4}$  alkoxy,  $C_{1-4}$  haloalkoxy,  $C(=0)R_7$ ,  $S(=0)_mR_8$  or  $SO_2NR_5R_6$ , wherein m is 0 2 and n is 0 2.
- 19. A compound selected from the group consisting of:
  - R-(+)-4-Ethylamino-3,4-dihydro-2/(3-methoxy)propyl-2H-thieno[3,2-e]-1,2-thiazine-6-sulfonamide-1/1-dioxide hydrochloride;
  - (R)-4-Ethylamino-2-(4-methoxy-phenyl)-3,4-dihydro-2H-thieno[3,2-e]-1,2-thiazine-6-sulfonamide 1,1-dioxide hydrochloride;
  - (R)-4-Ethylamino-3,4-dihydro-2-(3-methoxy-phenyl)-2H-thieno[3,2-e]-1,2-thiazine-6-sulfonamide 1,1-dioxide hydrochloride;
  - (R)-4-Ethylamino-2-(4-hydroxy-phenyl)-3,4-dihydro-2H-thieno[3,2-e]-1,2-thiazine-6-sulfonamide 1,1-dioxide hydrochloride;
  - (R)-4-Ethylamino-3,4-dihydro-2-(3-hydroxy-phenyl)-2H-thieno[3,2-e]-1,2-thiazine-6-sulfonamide 1,1-dioxide hydrochloride;
  - (R)-4-Ethylamino-3,4-dihydro-2-(4-hydroxy-phenylmethyl)-2H-thieno[3,2-e]-1,2-thiaz ne-6-sulfonamide 1,1-dioxide hydrochloride;
  - (R)-4-Ethylamino-3,4-dihydro-2-(3-methoxy-phenylmethyl)-2H-thieno[3,2-e]-1,2-thiazine-6-sulfonamide 1,1-dioxide hydrochloride;
  - R-(+)-3,4-Dihydro-2-(4-methoxybutyl)-4-propylamino-2H-thieno[3,2-e]-1,2-thiazine-6-sulfonamide 1,1-dioxide hydrochloride;
  - R-(+)-4-Ethylamino-3, 4-dihydro-2-(4-methoxybutyl)-2H-thieno[3,2-methoxybutyl)

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e]-1,2-thiazine-6-sulfonamide 1,1-dioxide hydrochloride;

R-(+)-4-Ethylamino-3,4-dihydro-2-(2-methylpropyl)-2H-thieno[3,2-

e]-1,2-thiazine-6-sulfonamide 1,1-dioxide hydrochloride;

R-(+)-4-Ethylamino-3,4-dihydro-2-(6-hydroxyhexyl)-2H-thieno[3,2-e]-1,2-thiazine-6-sulfonamide 1,1-dioxide hydrochloride;

R-3,4-Dihydro-2-(3-hydroxypropyl)-4-(2-methylpropyl)amino-2H-thieno[3,2-e]-1,2-thiazine-6-sulfonamide 1,1-dioxide hydrochloride hemihydrate.

20. A formulation for controlling intraocular pressure comprising a therapeutically effective amount of the compund of Claim 1 in a pharmaceutically acceptable carrier.

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- 21. A formulation for controlling intraocular pressure comprising a therapeutically effective amount of the compund of Claim 7 in a pharmaceutically acceptable carrier.
- 22. A formulation for controlling intraocular pressure comprising a therapeutically effective amount of the compund of Claim 13 in a pharmaceutically acceptable carrier.

23. A formulation for controlling intraocular pressure comprising a therapeutically effective amount of the compund of Claim 19 in a pharmaceutically acceptable carrier.

The formulation of Claim 20 wherein the compound concentration is between 0.1 and 10% by weight.

- 25. The formulation of Claim 21 wherein the compound concentration is between 0.1 and 10% by weight.
- 25 26. The formulation of Claim 22 wherein the compound concentration is between 0.1 and 10% by weight.

The formulation of Claim 23 wherein the compound concentration is between 0.1 and 10% by weight.

The formulation of Claim 24 wherein the compound concentration is between 0.1 and 10% by weight.

- A method for controlling intraocular pressure which comprises topically administering to the affected eye a therapeutically effective amount of the compound of Claim 1.
  - 30. A method for controlling intraocular pressure which comprises topically administering to the affected eye a therapeutically effective amount of the compound of Claim 7.
  - 31. A method for controlling intraocular pressure which comprises topically administering to the affected eye a therapeutically effective amount of the compound of Claim 13.
- A method for controlling intraocular pressure which comprises topically administering to the affected eye a therapeutically effective amount of the compound of Claim 19.